

Recent developments and near term plans

Wayne Reiersen

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Today's topics

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- Near term developments and plans (Reiersen)
- Pro/E and Intralink use and training (Brown)
- Work planning and authorization (Strykowski)
- Diagnostic interface development (Johnson)

Developments since the CDR

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- Changes in the cost and schedule baselines
- Changes in the stellarator core design
- Changes in the WBS
- Organizational changes
- Development of plans and procedures

Cost and schedule baseline changes

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- At the time of the CDR, budget profiles inconsistent with DOE guidance
- CDR recommendations included...
 - Investigating fabricating all coils of a given type sequentially rather than by period
 - Investigating ways to provide more time for winding and assembly (expedite delivery of the winding form)

C/S baseline changes (2)

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- Sequential manufacturing by coil type looks very attractive – adopted as baseline
- Durations for winding form mfg development and production were reduced in consultation with one of the potential suppliers
- Stayed with one supplier for production articles and one VPI station
- VV moved onto critical path – opted to not pre-fit all three segments at factory
- First plasma date shifted to June, 2007 increasing float by three months
- Cost increased to \$73.5M
- **Needs careful review by WBS Managers**

Changes in the modular coil design

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- Plan is to adopt the best healed coil set we have in hand at the end of Sept
 - Healed coil set at CDR falls short on divertor performance
 - Candidate coil designs with improved SOL are being subject to healing
- Engineering looking to shrink VV/FW envelope to provide more space for divertor SOL

Changes in the WBS

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- WBS modified after CDR for better alignment with procurement plans and organizational structure
 - Field period assembly moved out of WBS 7 (Test Cell Prep and Machine Assembly) and into WBS 1 (Stellarator Core Systems)
 - FCPC building modifications moved under WBS 4 (Electric Power)

Schedule for adopting changes

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- Finalize changes to cost and schedule baseline by August 8
 - Factor in changes in WBS, procurement plans, budget profile constraints
 - Technical basis should be the CDR design
 - Required as basis for generating FY03 WAFs
- Adopt new modular coil design by the end of September
- Update technical, cost, and schedule baselines by the end of November (based on new modular coils)
 - Required as basis for mfg development activities and December DOE cost and schedule review

Organizational changes

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- Strykowski now Project Control Manager
- Simmons now Systems Engineering Support Manager
- Perry now in charge of Test Cell Preparation and Machine Assembly (all Test Cell activities)
- Chrzanowski now in charge of all TFTR Test Cell activities, including coil winding and field period assembly (reporting through Brad)
- Cognizant engineers identified within WBS 1
- [Org chart](#) available on the Engineering Web

Development of plans and procedures



- Three key documents are being drafted – the Systems Engineering Management Plan (SEMP), the Configuration Management Plan (CMP), and the Data Management Plan (DMP)
- These documents will define how we are going to do business
- NCSX is different from previous PPPL projects in several important ways – we are a multi-institutional, geographically distributed team utilizing paperless systems for documents and drawings (including 3D models)
- Careful review and critique of these plans by project participants is essential for us to put systems together that will work well for everyone's benefit – thanks for your cooperation!